	Resting Translesional Gradient				Hyperemic Translesional Gradient			
	RG Pre-Tx		RG Post-Tx		HG Pre-Tx		HG Post-Tx	
	correlation coefficient, R	p-value	correlation coefficient, R	p-value	correlation coefficient, R	p-value	correlation coefficient, R	p-value
Peak Systolic Velocity (PSV-L)	0.400	0.041	0.525	0.009	0.423	0.034	0.540	0.008
PSV-Ratio (PSV-R)	0.469	0.01	0.429	0.04	0.557	0.003	0.486	0.02
Ankle Brachial Index (ABI)	-0.586	0.001	-0.417	0.04	-0.376	0.062	-0.084	0.7
	Delta RG (Pre-Tx - Post-Tx)				Delta HG (Pre-Tx - Post-Tx)			
Delta Pre-Tx vs Post-Tx	correlation coefficient, R		p-value		correlation coefficient, R		p-value	
Delta PSV-L	0.371		0.07		0.313		0.16	
Delta PSV-R	0.755		<0.001		0.779		<0.001	
Delta ABI	0.627		<0.001		0.527		0.01	

Conclusions: The resting gradient (RG) and hyperemic gradient (HG) measured via the pressure wire showed an excellent correlation with the established markers of stenosis severity (PSV-L, PSV-R, and ABI) both prior as well as after angioplasty. Moreover, the improvement in RG and HG after angioplasty strongly correlated with the improvement in PSV-L, PSV-R and ABI. Therefore, pressure wire can be an excellent tool to guide infrainguinal vascular interventions.

TCT-525

Wound depth assessed by Texas grade affect wound healing in critical limb ischemia after endovascular therapy

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Background: Wound depth assessment by Texas classification is important for diabetic foot. We evaluated wound depth in patients with critical limb ischemia (CLI) with tissue loss and investigated wound healing.
Methods: Between April 2007 and January 2013, consecutive 177 patients (225 limbs) who received endovascular treatment for CLI with tissue loss were enrolled in this study. In these limbs, 236 individual wounds existed and we evaluated their wound depth by Texas classification. Wound depth was divided into three groups: grade 1 (superficial wound not involving tendon, capsule, or bone; n= 90), grade 2 (wound penetrating to tendon or capsule; n = 111), and grade 3 (wound penetrating bone or joint; n =35). Study primary end point was wound healing rate and secondary end point was time to wound healing.
Results: At 3, 6, 9, and 12 months, wound healing rate was 58%, 73%, 86%, and 86%, respectively in grade 1; 23%, 34%, 37%, and 45%, respectively in grade 2; 11%, 17%, 17%, and 23%, respectively in grade 3. Kaplan-Meier analysis revealed statistically significant differences between the 3 groups (p< 0.001). The median time to healing was 65 days (interquartile range 25-142 days), 131 days (66-239), and 148 days (74-255), respectively between the 3 groups (p=0.007).
Conclusions: The severity of wound depth affect poor wound healing in CLI.

TCT-526

The Impact of Wound Healing for Isolated Below the Knee Lesion Patients with Critical Limb Ischemia

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Background: Endovascular treatment (EVT) has recently developed as a choice of treatment for critical limb ischemia (CLI). On the other hand, isolated below the knee (BK) lesion patients are still poor prognosis of wound healing. The impact of wound healing for these patients is unknown.
Methods: A multicenter study was conducted to evaluate the clinical outcomes of 314 Japanese critical limb ischemia patients. Of these, 109 isolated BK lesion patients who underwent EVT and have tissue loss (Rutherford 5, 6) were enrolled. Patients were enrolled from December 2009 to July 2011 and were followed-up for 12 months. We analyzed the predictor for the wound healing and its interval. This study was performed as a sub-analysis of OLIVE (EndOvascuLar Treatment for Infrainguinal VEssel) Registry.
Results: In 109 patients, age was 71.8±10.1 years old and Rutherford classification was 5.1±0.3. As 18 subjects died in 12 months, follow-up period was 9.9±3.7 months. Eighty nine patients' wound was healed and wound healing interval was 4.3±4.1 months. Number of treated BK vessels (1.6±0.6 vessels) was not correlated (p-value=0.83, odds ratio=1.12, 95% C.I. =0.72-1.73) with wound healing. In addition, 107 patient were established one straight line and it was no statistical significance (p-value=0.69, odds ratio=1.50, 95% C.I.=0.21-10.8) with wound healing. The predictors of wound healing were renal failure (p-value=0.02, odds ratio=0.61, 95% C.I.=0.40-0.93) and Rutherford 6 (p-value=0.05, odds ratio=0.47, 95% C.I.=0.22-1.03).
Conclusions: The impact of wound healing was not correlated with number of treated BK vessels and establishment of final one straight line for isolated BK lesion patients. The result of this study suggested that only baseline clinical characteristics were the predictor of wound healing in critical limb ischemia patients.

TCT-527

Obtainment of Wound Blush is The Most Important Angiographic Endpoint For Wound Healing

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Background: Several reports have been published of the acceptable patency and limb salvage rates following infra-popliteal interventions for the treatment of critical limb ischemia (CLI). However, the optimal angiographic endpoint of endovascular therapy (EVT) remains unclear. The aim of this study was to assess the relationship between the appearances of wound blush as an angiographic endpoint and wound healing in patients with CLI.
Methods: "Wound blush" was defined as contrast opacification of the vessels around the wound in final angiography of EVT through the catheter introduced into the popliteal artery. We analyzed the data of 185 limbs with ischemic ulcerations classified as Rutherford category 5 or 6, who underwent EVT alone, without bypass surgery. Patients were divided into two groups depending on whether or not wound heal was achieved.
Results: The overall wound heal rate was 73.5%. The rate of positive wound blush, patency of planter artery and the number of patent below the ankle vessels were significantly higher in the wound heal group than in no wound heal group. In the multivariate analysis, obtainment of wound blush was independent predictor for wound healing.
Conclusions: Presence of wound blush after EVT is associated with wound heals. Wound blush as an angiographic endpoint in EVT may be a novel predictor of wound heals in patients with CLI.

TCT-528

Differences in Long-term Outcomes After Endovascular Therapy for Femoropopliteal Artery Disease in Critical Limb Ischemia Patients With and Without Chronic Heart Failure

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Background: Clinical outcomes of endovascular therapy (EVT) for critical limb ischemia(CLI) patients with chronic heart failure(CHF) has not well investigated in real-world setting. The aim of this study is to examine differences in long-term outcomes after EVT for femoropopliteal artery disease in CLI patients with and without CHF.
Methods: From January 2004 to December 2011, a retrospective analysis was conducted of data from 13 Japanese cardiovascular centers. 899 CLI patients(1044 limbs,59.0% men,165 patients with CHF,73.5 ± 10.2 years old) underwent EVT for de novo femoropopliteal lesions. The primary outcome measure was amputation-free survival(AFS). The secondary outcome measures were overall survival, limb salvage rate, freedom from major adverse cardiovascular events (MACE; all-cause death, myocardial infarction and stroke) and freedom from major adverse limb events (MALE; includes any repeat revascularization and major amputation). Mean follow-up was 28 ± 21 months. ±
Results: The AFS, overall survival, freedom from MACE and freedom from MALE rate at 4 years were significantly lower in the CHF group(42.0% vs 53.7% P< 0.0001, 46.9% vs 58.2% P< 0.0001, 34.8% vs 54.2% P=0.02 40.0% vs 54.9% P=0.01).Limb salvage rate was no significant difference between the groups. After correcting all end points with baseline variables, CHF was effective for worsening AFS (hazard ratio [HR], 1.42; 95% confidential interval [CI]. 1.02-1.95; adjusted P=0.03) and freedom from MACE (hazard ratio [HR], 1.47 95% confidential interval [CI]. 1.07-2.01; adjusted P=0.01). The others were no significant differences between the groups.
Conclusions: Chronic heart failure may worsen the AFS, and freedom from MACE after EVT for femoropopliteal artery disease in critical limb ischemia patients. CHF may be a risk factor for patients with critical limb ischemia.